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LOPHODERMIUM ABIETIS ON PSEUDOTSUGA TAXIFOLIA

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For the past 50 years species of the genera *Hypoderma*, *Hypodermella*, and *Lophodermium* and the damage they cause to young conifers have figured prominently in European literature, while within the past few years there has been an increasing interest among mycologists and forest pathologists in North America in the same fungi. New species have been described, new hosts recorded, and knowledge of distribution extended. Not only do these fungi comprise an attractive group for study but they are becoming increasingly important from an economic standpoint as the United States and Canada more and more turn their attention to timber growing. Commonly endemic on young conifers, they often become epidemic and considerable loss results.

Owing to the extremely important position that Douglas fir (*Pseudotsuga taxifolia* (Lam.) Br.) occupies and will continue to occupy in the forests of the Pacific Northwest, any parasite attacking this species demands attention. *Lophodermium Abietis* Rostrup, which attacks and kills the needles of young firs and spruces, has been reported on Douglas fir in Denmark by Rostrup (**3**, p. 527). This is the only record of this fungus on Douglas fir known to the writer, later records always referring to the observation by Rostrup. The writer has never found the fungus on Douglas fir. Throughout the Western United States *L. Abietis* is not uncommon on Pacific silver fir (*Abies amabilis* (Loud.) Forbes), white fir (*A. concolor* Lindl. & Gord.), lowland white fir (*A. grandis* Lindl.), alpine fir (*A. lasiocarpa* (Hook.) Nutt.), and Sitka spruce (*Picea sitchensis* (Bong.) Carr.) where the species are mixed with Douglas fir, but the latter is not infected. In Great Britain in 1925 the fungus was found on fallen needles of Sitka spruce and Norway spruce (*Picea excelsa* Link.), but young Douglas firs in the immediate vicinity were not affected. Again, on the Island of Bronholm in Denmark no trace of the fungus was

seen in the Douglas fir plantations in the State Forest of Almindingen when they were visited in September, 1925.

The only American record the writer has been able to trace, transmitted through the courtesy of John Dearness, was a collection made by V. Simmons at Coldspring, Albany County, Wyoming, June 23, 1917. The host was labelled *Pseudotsuga taxifolia*, but a critical study of the needles proved it to be alpine fir.

Lind (**2**, p. 147) has reported the fungus on Douglas fir in Denmark, but an examination of the collection in Rostrup's herbarium at Copenhagen in September, 1925, on which this report was based showed it to be a mixture of Douglas fir and spruce needles, with the apothecia of the fungus occurring on the spruce needles only. The needles appeared to be those of Norway spruce. No other collection of *L. Abietis* on Douglas fir was found in Rostrup's herbarium. Recently (**1**, p. 486) it has been pointed out that attacks of consequence on Douglas fir have never been observed in Denmark and it is recommended that this species, because of its great resistance to the fungus, be given preference over Norway spruce for planting in the coast region.

It may be concluded that it is highly doubtful if *Lophodermium Abietis* attacks Douglas fir and past records have been based on an error in host determination.

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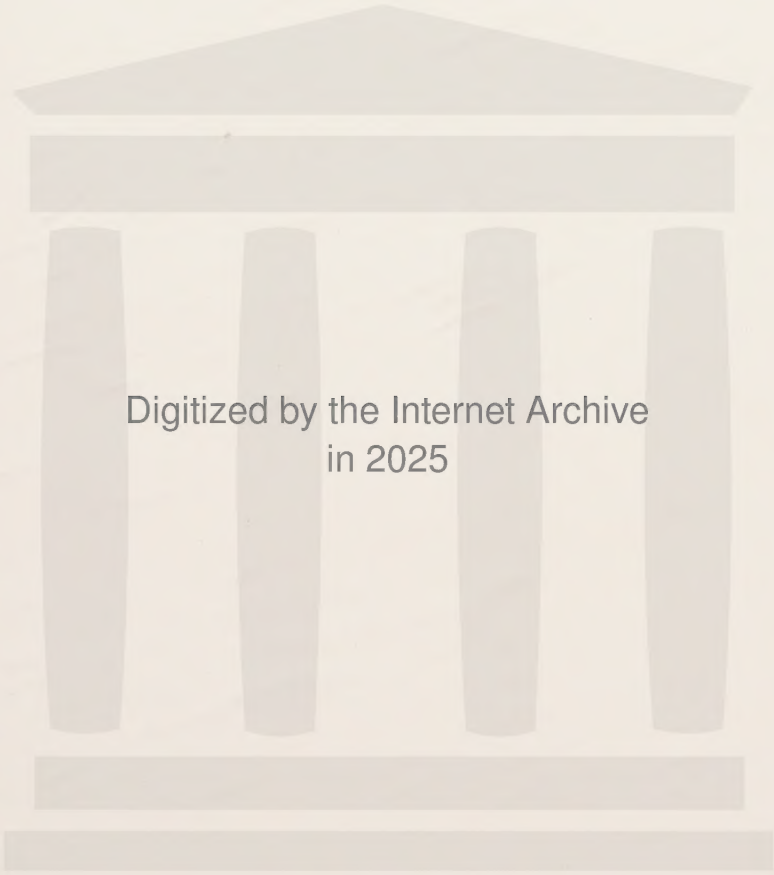
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